

**RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431B**

DATE: 01/11/2000
TIME: 16:50:30

INPUT SET: S34420.raw

This Raw Listing contains the General Information Section and up to the first 5 pages.

SEQUENCE LISTING

1
2
3 (1) General Information:
4 (i) APPLICANT: Robert G. Ulrich,
5 Mark A. Olson
6 Sina Bavari
7
8 (ii) TITLE OF INVENTION: Bacterial Superantigen
9 Vaccines
10
11 (iii) NUMBER OF SEQUENCES: 25
12
13 (iv) CORRESPONDENCE ADDRESS:
14 (A) ADDRESSEE: Charles H. Harris
15 (B) STREET: US Army MRMIC -504 Scott Street MCMR-JA (Charles H. Harris-Patent Atty)
16 (C) CITY: FORT DETRICK
17 (D) STATE: MARYLAND
18 (E) COUNTRY: USA
19 (F) ZIP: 21702-5012
20
21 (v) COMPUTER READABLE FORM:
22 (A) MEDIUM TYPE: Floppy disk
23 (B) COMPUTER: Apple Macintosh
24 (C) OPERATING SYSTEM: Macintosh 7.5
25 (D) SOFTWARE: Microsoft Word 6.0
26
27 (vi) CURRENT APPLICATION DATA:
28 (A) APPLICATION NUMBER: 08/882,431
29 (B) FILING DATE: June 25, 1997
30 (C) CLASSIFICATION:
31
32 (vii) PRIOR APPLICATION DATA:
33 (A) APPLICATION NUMBER:
34 (B) FILING DATE:
35
36 (viii) ATTORNEY/AGENT INFORMATION:
37 (A) NAME: Charles H. Harris
38 (B) REGISTRATION NUMBER: 34,616
39 (C) REFERENCE/DOCKET NUMBER:
40
41 (ix) TELECOMMUNICATION INFORMATION
42 (A) TELEPHONE: (301) 619-2065
43 (B) TELEFAX: (301) 619-7714
44
45
46 (2) INFORMATION FOR SEQ ID NO:1:

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
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47 (i) SEQUENCE CHARACTERISTICS:
48 (A) LENGTH: 830
49 (B) TYPE: Nucleic Acid
50 (C) STRANDEDNESS: Unknown
51 (D) TOPOLOGY: Unknown
52
53 (ii) MOLECULE TYPE: DNA
54
55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
56
57 atgaaaaaaaaa cagcatttac attactttta ttcattgccc 40
58
59 taacgttgac aacaagtcca cttgtaaatg gtagcgagaa 80
60
61 aagcgaagaa ataaatgaaa aagatttgcg aaaaaagtct 120
62
63 gaattgcagg gaacagcgtt aggcaatctt aaacaaatct 160
64
65 attattacaa tgaaaaagct aaaactgaaa ataaagagag 200
66
67 tcacgatcaa tttcgacagc atactatatt gtttaaaggc 240
68
69 ttttttacag atcattcggt gtataacgtat ttattagttac 280
70
71 gttttgattc aaaggatatt gttgataat ataaaggaa 320
72
73 aaaagttagac ttgtatggtg cttatgctgg ttatcaatgt 360
74
75 gcgggtggta caccaaacaa aacagctgt atgtatggt 400
76
77 gtgtaacgtt acatgataat aatcgattga ccgaagagaa 440
78
79 aaaagtgccg atcaatttat ggctagacgg taaacaaaat 480
80
81 acagtacctt tggaaacggt taaaacgaat aagaaaaatg 520
82
83 taactgttca ggagttggat cttcaagcaa gacgttattt 560
84
85 acaggaaaaaaaaa tataatttat ataactctga tgttttgat 600
86
87 gggaaaggttc agaggggatt aatcggttt catacttcta 640
88
89 cagaaccttc ggttaattac gatttatttgcgtcaagg 680
90
91 acagtattca aatacactat taagaatata tagagataat 720
92
93 aaaacgatta actctgaaaa catgcatatt gatatatatt 760
94
95 tatataacaag ttaaACATGG TAGTTTGAC CAACGTAATG 800
96
97 TTCAGATTAT TATGAACCGA GAATAATCTA 830
98
99

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
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100 (2) INFORMATION FOR SEQ ID NO:2:
101 (i) SEQUENCE CHARACTERISTICS:
102 (A) LENGTH: 257
103 (B) TYPE: Amino Acid
104 (C) STRANDEDNESS: Unknown
105 (D) TOPOLOGY: Unknown
106 (ii) MOLECULE TYPE: Peptide
107 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
108
109 Met Lys Lys Thr Ala Phe Thr Leu Leu Leu
110 1 5 10
111
112 Phe Ile Ala Leu Thr Leu Thr Thr Ser Pro
113 15 20
114
115 Leu Val Asn Gly Ser Glu Lys Ser Glu Glu
116 25 30
117
118 Ile Asn Glu Lys Asp Leu Arg Lys Lys Ser
119 35 40
120
121 Glu Leu Gln Gly Thr Ala Leu Gly Asn Leu
122 45 50
123
124 Lys Gln Ile Tyr Tyr Tyr Asn Glu Lys Ala
125 55 60
126
127 Lys Thr Glu Asn Lys Glu Ser His Asp Gln
128 65 70
129
130 Phe Arg Gln His Thr Ile Leu Phe Lys Gly
131 75 80
132
133 Phe Phe Thr Asp His Ser Trp Tyr Asn Asp
134 85 90
135
136 Leu Leu Val Arg Phe Asp Ser Lys Asp Ile
137 95 100
138
139 Val Asp Lys Tyr Lys Gly Lys Lys Val Asp
140 105 110
141
142 Leu Tyr Gly Ala Tyr Ala Gly Tyr Gln Cys
143 115 120
144
145 Ala Gly Gly Thr Pro Asn Lys Thr Ala Cys
146 125 130
147
148 Met Tyr Gly Gly Val Thr Leu His Asp Asn
149 135 140
150
151 Asn Arg Leu Thr Glu Glu Lys Lys Val Pro
152 145 150

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
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153
154 Ile Asn Leu Trp Leu Asp Gly Lys Gln Asn
155 155 160
156
157 Thr Val Pro Leu Glu Thr Val Lys Thr Asn
158 165 170
159
160 Lys Lys Asn Val Thr Val Gln Glu Leu Asp
161 175 180
162
163 Leu Gln Ala Arg Arg Tyr Leu Gln Glu Lys
164 185 190
165
166 Tyr Asn Leu Tyr Asn Ser Asp Val Phe Asp
167 195 200
168
169 Gly Lys Val Gln Arg Gly Leu Ile Val Phe
170 205 210
171
172 His Thr Ser Thr Glu Pro Ser Val Asn Tyr
173 215 220
174
175 Asp Leu Phe Gly Ala Gln Gly Gln Tyr Ser
176 225 230
177
178 Asn Thr Leu Ile Arg Ile Tyr Arg Asp Asn
179 235 240
180
181 Lys Thr Ile Asn Ser Glu Asn Met His Ile
182 245 250
183
184 Asp Ile Tyr Leu Tyr Thr Ser
185 255
186
187
188 (2) INFORMATION FOR SEQ ID NO:3:
189 (i) SEQUENCE CHARACTERISTICS:
190 (A) LENGTH: 757
191 (B) TYPE: Nucleic Acid
192 (C) STRANDEDNESS: Unknown
193 (D) TOPOLOGY: Unknown
194 (ii) MOLECULE TYPE: DNA
195
196 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
197
198 atgagaaaaag cgaagaaata aatgaaaaag atttgcgaaa 40
199
200 aaagtctgaa ttgcaggaa cagctttagg caatctaaa 80
201
202 Caaatctatt attacaatga aaaagctaaa actgaaaata 120
203
204 aagagagtca cgatcaattt cgacagcata ctatattgtt 160
205

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
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INPUT SET: S34420.raw

206 taaaggctt tttacagatc attcgtggta taacgattta 200
207
208 ttagtacgtt ttgattcaaa ggatattgtt gataaaatata 240
209
210 aaggaaaaaa agtagacttg tatggtgctt atgctggtaa 280
211
212 tcaatgtgcg ggtggtacac caaacaaaac agcttgtatg 320
213
214 tatggtggtg taacgttaca tgataataat cgattgaccg 360
215
216 aagagaaaaa agtgcgcgatc aatttatggc tagacggtaa 400
217
218 aaaaaataca gtaccttgg aaacggttaa aacgaataaag 440
219
220 aaaaatgtaa ctgttcagga gttggatctt caagcaagac 480
221
222 gttatttaca gaaaaatata aatttatata actctgatgt 520
223
224 ttttcatggg aaggttcaga ggggattaaat cgtgtttcat 560
225
226 acttctacag aaccttcggt taattacgat ttatggtg 600
227
228 ctcaaggaca gtattcaa at acactattaa gaatataatag 640
229
230 agataataaa acgattaact ctgaaaacat gcatattgat 680
231
232 atatatttat atacaagttt aACATGGTAG TTTTGACCAA 720
233
234 CGTAATGTTC AGATTATTAT GAACCGAGAA TAATCTA 757
235
236

237 (2) INFORMATION FOR SEQ ID NO:4:
238 (i) SEQUENCE CHARACTERISTICS:
239 (A) LENGTH:233
240 (B) TYPE: Amino Acid
241 (C) STRANDEDNESS: Unknown
242 (D) TOPOLOGY: Unknown
243 (ii) MOLECULE TYPE: Peptide
244 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:
245

246 Met Glu Lys Ser Glu Glu Ile Asn Glu Lys
247 5 10
248
249 Asp Leu Arg Lys Lys Ser Glu Leu Gln Gly
250 15 20
251
252 Thr Ala Leu Gly Asn Leu Lys Gln Ile Tyr
253 25 30
254
255 Tyr Tyr Asn Glu Lys Ala Lys Thr Glu Asn
256 35 40
257
258 Lys Glu Ser His Asp Gln Phe Arg Gln His

***** PREVIOUSLY ERRORED SEQUENCES - EDITED *****

1540 (2) INFORMATION FOR SEQ ID NO:24:
1541 (i) SEQUENCE CHARACTERISTICS:
1542 (A) LENGTH: 79
1543 (B) TYPE: Amino Acid
1544 (C) STRANDEDNESS: Unknown
1545 (D) TOPOLOGY: Unknown
1546 (ii) MOLECULE TYPE: Peptide
1547 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:24:
1548 Ser Val Asp Gln Leu Leu Ser His Asp Leu
1549 5 10
1550 Ile Tyr Asn Val Ser Gly Pro Asn Tyr Asp
1551 15 20
1552 Lys Leu Lys Thr Glu Leu Lys Asn Gln Glu
1553 25 30
1554 Met Ala Thr Leu Phe Lys Asp Lys Asn Val
1555 35 40
1556 Asp Ile Tyr Gly Val Glu Tyr Tyr His Leu
1557 45 50
1558 Cys Tyr Leu Cys Glu Asn Ala Glu Arg Ser
1559 55 60
1560 Ala Cys Ile Tyr Gly Gly Val Thr Asn His
1561 65 70
1562 Glu Gly Asn His Leu Glu Ile Pro Lys
1563 75
1564

1565 (2) INFORMATION FOR SEQ ID NO:25:
1566 (i) SEQUENCE CHARACTERISTICS:
1567 (A) LENGTH: 73
1568 (B) TYPE: Amino Acid
1569 (C) STRANDEDNESS: Unknown
1570 (D) TOPOLOGY: Unknown
1571 (ii) MOLECULE TYPE: Peptide
1572 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:25:
1573 Val Leu Asp Asn Ser Leu Gly Ser Met Arg
1574 5 10
1575 Ile Lys Asn Thr Asp Gly Ser Ile Ser Leu
1576 15 20
1577 Ile Ile Phe Pro Ser Pro Tyr Tyr Ser Pro
1578 25 30
1579 Ala Phe Thr Lys Gly Glu Lys Val Asp Leu
1580 35 40
1581 Asn Thr Lys Arg Thr Lys Lys Ser Gln His
1582 45 50
1583 Thr Ser Glu Gly Thr Tyr Ile His Phe Gln
1584 55 60
1585 Ile Ser Gly Val Thr Asn Thr Glu Lys Leu

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**RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431B**

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INPUT SET: S34420.raw

1586

65

70

1587 Pro Thr Pro

1588

PAGE: 1

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/882,431B

DATE: 01/11/2000

TIME: 16:50:32

INPUT SET: S34420.raw

Line

Error

Original Text

Allen

1631

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION **US/08/882,431B**DATE: 01/11/2000
TIME: 01:18:02

INPUT SET: S34420.raw

This Raw Listing contains the General
Information Section and those Sequences
containing ERRORS.

SEQUENCE LISTING

1
2
3 (1) General Information:
4 (i) APPLICANT: Robert G. Ulrich,
5 Mark A. Olson
6 Sina Bavari
7
8 (ii) TITLE OF INVENTION: Bacterial Superantigen
9 Vaccines
10
11 (iii) NUMBER OF SEQUENCES: 25
12
13 (iv) CORRESPONDENCE ADDRESS:
14 (A) ADDRESSEE: Charles H. Harris
15 (B) STREET: US Army MRM -504 Scott Street MCMR-JA (Charles H. Harris-Patent Atty)
16 (C) CITY: FORT DETRICK
17 (D) STATE: MARYLAND
18 (E) COUNTRY: USA
19 (F) ZIP: 21702-5012
20
21 (v) COMPUTER READABLE FORM:
22 (A) MEDIUM TYPE: Floppy disk
23 (B) COMPUTER: Apple Macintosh
24 (C) OPERATING SYSTEM: Macintosh 7.5
25 (D) SOFTWARE: Microsoft Word 6.0
26
27 (vi) CURRENT APPLICATION DATA:
28 (A) APPLICATION NUMBER: 08/882,431
29 (B) FILING DATE: June 25, 1997
30 (C) CLASSIFICATION:
31
32 (vii) PRIOR APPLICATION DATA:
33 (A) APPLICATION NUMBER:
34 (B) FILING DATE:
35
36 (viii) ATTORNEY/AGENT INFORMATION:
37 (A) NAME: Charles H. Harris
38 (B) REGISTRATION NUMBER: 34,616
39 (C) REFERENCE/DOCKET NUMBER:
40
41 (ix) TELECOMMUNICATION INFORMATION
42 (A) TELEPHONE: (301) 619-2065
43 (B) TELEFAX: (301) 619-7714
44
45

Does Not Comply
Corrected Diskette Needed

ERRORED SEQUENCES FOLLOW:

1353 (18) INFORMATION FOR SEQUENCE ID NO:17:
1354 (i) SEQUENCE CHARACTERISTICS:
1355 (A) LENGTH: 82
1356 (B) TYPE: Amino Acid
1357 (C) STRANDEDNESS: Unknown
1358 (D) TOPOLOGY: Unknown
1359 (ii) Molecule type: Peptide
1360 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17
1361 Ser His Asp Gln Phe Leu Gln His Thr Ile
1362 5 10
1363 Leu Phe Lys Gly Phe Phe Thr Asp His Ser
1364 15 20
1365 Trp Tyr Asn Asp Leu Leu Val Asp Phe Asp
1366 25 30
1367 Ser Lys Asp Ile Val Asp Lys Tyr Lys Gly
1368 35 40
1369 Lys Lys Val Asp Leu Tyr Gly Ala Tyr Tyr
1370 45 50
1371 Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn
1372 55 60
1373 Lys Thr Ala Cys Met Tyr Gly Gly Val Thr
1374 65 70
1375 Leu His Asp Asn Asn Arg Leu Thr Glu Glu
1376 75 80
1377 Lys Lys
1378

1379 (19) INFORMATION FOR SEQUENCE ID NO:18:
1380 (i) SEQUENCE CHARACTERISTICS:
1381 (A) LENGTH: 82
1382 (B) TYPE: Amino Acid
1383 (C) STRANDEDNESS: Unknown
1384 (D) TOPOLOGY: Unknown
1385 (ii) Molecule type: Peptide
1386 Thr Gly Asp Gln Phe Leu Glu Asn Thr Leu
1387 5 10
1388 Leu Tyr Lys Lys Phe Phe Thr Asp Leu Ile
1389 15 20
1390 Asn Phe Glu Asp Leu Leu Ile Asn Phe Asn
1391 25 30
1392 Ser Lys Glu Met Ala Gln His Phe Lys Ser
1393 35 40
1394 Lys Asn Val Asp Val Tyr Pro Ile Arg Tyr
1395 45 50
1396 Ser Ile Asn Cys Tyr Gly Gly Glu Ile Asp
1397 55 60
1398 Arg Thr Ala Cys Thr Tyr Gly Gly Val Thr

Same error

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
TIME: 01:18:02

INPUT SET: S34420.raw

--> 1399 65 70
--> 1400 Pro His Glu Gly Asn Lys Leu Lys Glu Arg
--> 1401 75 80
--> 1402 Lys Lys
1403
1404

1405 (20) INFORMATION FOR SEQUENCE ID NO:19:
1406 (i) SEQUENCE CHARACTERISTICS:
1407 (A) LENGTH: 82
1408 (B) TYPE: Amino Acid
1409 (C) STRANDEDNESS: Unknown
1410 (D) TOPOLOGY: Unknown
1411 (ii) Molecule type: Peptide
1412 Ser Asp Asp Gln Phe Leu Glu Asn Thr Leu
1413 5 10
1414 Leu Phe Lys Gly Phe Phe Thr Gly His Pro
1415 15 20
--> 1416 Trp Tyr Asn Asp Leu Leu Val Asp Leu Gly
--> 1417 25 30
--> 1418 Ser Lys Asp Ala Thr Asn Lys Tyr Lys Gly
--> 1419 35 40
--> 1420 Lys Lys Val Asp Leu Tyr Gly Ala Tyr Tyr
--> 1421 45 50
--> 1422 Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn
--> 1423 55 60
--> 1424 Lys Thr Ala Cys Met Tyr Gly Gly Val Thr
--> 1425 65 70
--> 1426 Leu His Asp Asn Asn Arg Leu Thr Glu Glu
--> 1427 75 80
--> 1428 Lys Lys
1429

Dane

1430 (21) INFORMATION FOR SEQUENCE ID NO:20:
1431 (i) SEQUENCE CHARACTERISTICS:
1432 (A) LENGTH: 89
1433 (B) TYPE: Amino Acid
1434 (C) STRANDEDNESS: Unknown
1435 (D) TOPOLOGY: Unknown
1436 (ii) Molecule type: Peptide
1437 Ser Ile Asp Gln Phe Leu Tyr Phe Asp Leu
1438 5 10
1439 Ile Tyr Ser Ile Lys Asp Thr Lys Leu Gly
1440 15 20
--> 1441 Asn Tyr Asp Asn Val Arg Val Glu Phe Lys
--> 1442 25 30
--> 1443 Asn Lys Asp Leu Ala Asp Lys Tyr Lys Asp
--> 1444 35 40
--> 1445 Lys Tyr Val Asp Val Phe Gly Ala Asn Tyr
--> 1446 45 50
--> 1447 Tyr Gln Cys Tyr Phe Ser Lys Lys Thr Asn
--> 1448 55 60
--> 1449 Asp Ile Asn Ser His Gln Thr Asp Lys Arg

Dane

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
TIME: 01:18:03

INPUT SET: S34420.raw

--> 1450 65 70
 --> 1451 Lys Thr Cys Met Tyr Gly Gly Val Thr Glu
 --> 1452 75 80
 --> 1453 His Asn Gly Asn Gln Leu Asp Lys Tyr
 --> 1454 85
 1455

1456 (22) INFORMATION FOR SEQUENCE ID NO:21:
 1457 (i) SEQUENCE CHARACTERISTICS:
 1458 (A) LENGTH: 89
 1459 (B) TYPE: Amino Acid
 1460 (C) STRANDEDNESS: Unknown
 1461 (D) TOPOLOGY: Unknown
 1462 (ii) Molecule type: Peptide
 1463
 1464 Ser Val Asp Lys Phe Leu Ala His Asp Leu
 1465 5 10
 1466 Ile Tyr Asn Ile Ser Asp Lys Lys Leu Lys
 1467 15 20
 --> 1468 Asn Tyr Asp Lys Val Lys Thr Glu Leu Leu
 --> 1469 25 30
 --> 1470 Asn Glu Gly Leu Ala Lys Lys Tyr Lys Asp
 --> 1471 35 40
 --> 1472 Glu Val Val Asp Val Tyr Gly Ser Asn Tyr
 --> 1473 45 50
 --> 1474 Tyr Val Asn Cys Tyr Phe Ser Ser Lys Asp
 --> 1475 55 60
 --> 1476 Asn Val Gly Lys Val Thr Gly Gly Lys Thr
 --> 1477 65 70
 --> 1478 Cys Met Tyr Gly Gly Ile Thr Lys His Glu
 --> 1479 75 80
 --> 1480 Gly Asn His Phe Asp Asn Gly Asn Leu
 --> 1481 85
 1482

Jane
 ↴

1483 (23) INFORMATION FOR SEQUENCE ID NO:22:
 1484 (i) SEQUENCE CHARACTERISTICS:
 1485 (A) LENGTH: 89
 1486 (B) TYPE: Amino Acid
 1487 (C) STRANDEDNESS: Unknown
 1488 (D) TOPOLOGY: Unknown
 1489 (ii) Molecule type: Peptide
 1490 Ser Val Asp Lys Phe Leu Ala His Asp Leu
 1491 5 10
 1492 Ile Tyr Asn Ile Ser Asp Lys Lys Leu Lys
 1493 15 20
 --> 1494 Asn Tyr Asp Lys Val Lys Thr Glu Leu Leu
 --> 1495 25 30
 --> 1496 Asn Glu Asp Leu Ala Lys Lys Tyr Lys Asp
 --> 1497 35 40
 --> 1498 Glu Val Val Asp Val Tyr Gly Ser Asn Tyr
 --> 1499 45 50
 --> 1500 Tyr Val Asn Cys Tyr Phe Ser Ser Lys Asp

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
TIME: 01:18:03

INPUT SET: S34420.raw

--> 1501 55 60
--> 1502 Asn Val Gly Lys Val Thr Gly Gly Lys Thr
--> 1503 65 70
--> 1504 Cys Met Tyr Gly Gly Ile Thr Lys His Glu
--> 1505 75 80
--> 1506 Gly Asn His Phe Asp Asn Gly Asn Leu
--> 1507 85
--> 1508

1509 (24) INFORMATION FOR SEQUENCE ID NO:23:
1510 (i) SEQUENCE CHARACTERISTICS:
1511 (A) LENGTH:89
1512 (B) TYPE: Amino Acid
1513 (C) STRANDEDNESS: Unknown
1514 (D) TOPOLOGY: Unknown
1515 (ii) Molecule type: Peptide
1516 Ser Val Asp Lys Phe Leu Ala His Asp Leu
1517 5 10
1518 Ile Tyr Asn Ile Ser Asp Lys Lys Leu Lys
1519 15 20
--> 1520 Asn Tyr Asp Lys Val Lys Thr Glu Leu Leu
--> 1521 25 30
--> 1522 Asn Glu Asp Leu Ala Lys Lys Tyr Lys Asp
--> 1523 35 40
--> 1524 Glu Val Val Asp Val Tyr Gly Ser Asn Tyr
--> 1525 45 50
--> 1526 Tyr Val Asn Cys Tyr Phe Ser Ser Lys Asp
--> 1527 55 60
--> 1528 Asn Val Gly Lys Val Thr Gly Gly Lys Thr

--> 1529 65 70
--> 1530 Cys Met Tyr Gly Gly Ile Thr Lys His Glu
--> 1531 75 80
--> 1532 Gly Asn His Phe Asp Asn Gly Asn Leu
--> 1533 85
1534

1535 (25) INFORMATION FOR SEQUENCE ID NO:24:
1536 (i) SEQUENCE CHARACTERISTICS:
1537 (A) LENGTH: 79
1538 (B) TYPE: Amino Acid
1539 (C) STRANDEDNESS: Unknown
1540 (D) TOPOLOGY: Unknown
1541 (ii) Molecule type: Peptide
1542 Ser Val Asp Gln Leu Leu Ser His Asp Leu
1543 5 10
1544 Ile Tyr Asn Val Ser Gly Pro Asn Tyr Asp
1545 15 20
--> 1546 Lys Leu Lys Thr Glu Leu Lys Asn Gln Glu
--> 1547 25 30
--> 1548 Met Ala Thr Leu Phe Lys Asp Lys Asn Val
--> 1549 35 40
--> 1550 Asp Ile Tyr Gly Val Glu Tyr Tyr His Leu
--> 1551 45 50

Done

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
TIME: 01:18:04

INPUT SET: S34420.raw

--> 1552 Cys Tyr Leu Cys Glu Asn Ala Glu Arg Ser
--> 1553 55 60
--> 1554 Ala Cys Ile Tyr Gly Gly Val Thr Asn His
--> 1555 65 70
--> 1556 Glu Gly Asn His Leu Glu Ile Pro Lys
--> 1557 75
1558

1559 (26) INFORMATION FOR SEQUENCE ID NO:25:
1560 (i) SEQUENCE CHARACTERISTICS:
1561 (A) LENGTH: 73
1562 (B) TYPE: Amino Acid
1563 (C) STRANDEDNESS: Unknown
1564 (D) TOPOLOGY: Unknown
1565 (ii) Molecule type: Peptide
1566 Val Leu Asp Asn Ser Leu Gly Ser Met Arg
1567 5 10
1568 Ile Lys Asn Thr Asp Gly Ser Ile Ser Leu
1569 15 20
--> 1570 Ile Ile Phe Pro Ser Pro Tyr Tyr Ser Pro
--> 1571 25 30
--> 1572 Ala Phe Thr Lys Gly Glu Lys Val Asp Leu
--> 1573 35 40
--> 1574 Asn Thr Lys Arg Thr Lys Lys Ser Gln His
--> 1575 45 50
--> 1576 Thr Ser Glu Gly Thr Tyr Ile His Phe Gln
--> 1577 55 60
--> 1578 Ile Ser Gly Val Thr Asn Thr Glu Lys Leu
--> 1579 65 70
--> 1580 Pro Thr Pro
1581

Mane

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/882,431B

DATE: 01/11/2000

TIME: 01:18:04

INPUT SET: S34420.raw

Line	Error	Original Text
1365	Response Exceeds Line Limitations	Trp Tyr Asn Asp Leu Leu Val Asp Phe Asp
1366	Response Exceeds Line Limitations	25 30
1367	Response Exceeds Line Limitations	Ser Lys Asp Ile Val Asp Lys Tyr Lys Gly
1368	Response Exceeds Line Limitations	35 40
1369	Response Exceeds Line Limitations	Lys Lys Val Asp Leu Tyr Gly Ala Tyr Tyr
1370	Response Exceeds Line Limitations	45 50
1371	Response Exceeds Line Limitations	Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn
1372	Response Exceeds Line Limitations	55 60
1373	Response Exceeds Line Limitations	Lys Thr Ala Cys Met Tyr Gly Gly Val Thr
1374	Response Exceeds Line Limitations	65 70
1375	Response Exceeds Line Limitations	Leu His Asp Asn Asn Arg Leu Thr Glu Glu
1376	Response Exceeds Line Limitations	75 80
1377	Response Exceeds Line Limitations	Lys Lys
1390	Response Exceeds Line Limitations	Asn Phe Glu Asp Leu Leu Ile Asn Phe Asn
1391	Response Exceeds Line Limitations	25 30
1392	Response Exceeds Line Limitations	Ser Lys Glu Met Ala Gln His Phe Lys Ser
1393	Response Exceeds Line Limitations	35 40
1394	Response Exceeds Line Limitations	Lys Asn Val Asp Val Tyr Pro Ile Arg Tyr
1395	Response Exceeds Line Limitations	45 50
1396	Response Exceeds Line Limitations	Ser Ile Asn Cys Tyr Gly Gly Glu Ile Asp
1397	Response Exceeds Line Limitations	55 60
1398	Response Exceeds Line Limitations	Arg Thr Ala Cys Thr Tyr Gly Gly Val Thr
1399	Response Exceeds Line Limitations	65 70
1400	Response Exceeds Line Limitations	Pro His Glu Gly Asn Lys Leu Lys Glu Arg
1401	Response Exceeds Line Limitations	75 80
1402	Response Exceeds Line Limitations	Lys Lys
1416	Response Exceeds Line Limitations	Trp Tyr Asn Asp Leu Leu Val Asp Leu Gly
1417	Response Exceeds Line Limitations	25 30
1418	Response Exceeds Line Limitations	Ser Lys Asp Ala Thr Asn Lys Tyr Lys Gly
1419	Response Exceeds Line Limitations	35 40
1420	Response Exceeds Line Limitations	Lys Lys Val Asp Leu Tyr Gly Ala Tyr Tyr
1421	Response Exceeds Line Limitations	45 50
1422	Response Exceeds Line Limitations	Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn
1423	Response Exceeds Line Limitations	55 60
1424	Response Exceeds Line Limitations	Lys Thr Ala Cys Met Tyr Gly Gly Val Thr
1425	Response Exceeds Line Limitations	65 70
1426	Response Exceeds Line Limitations	Leu His Asp Asn Asn Arg Leu Thr Glu Glu
1427	Response Exceeds Line Limitations	75 80
1428	Response Exceeds Line Limitations	Lys Lys
1441	Response Exceeds Line Limitations	Asn Tyr Asp Asn Val Arg Val Glu Phe Lys
1442	Response Exceeds Line Limitations	25 30
1443	Response Exceeds Line Limitations	Asn Lys Asp Leu Ala Asp Lys Tyr Lys Asp
1444	Response Exceeds Line Limitations	35 40
1445	Response Exceeds Line Limitations	Lys Tyr Val Asp Val Phe Gly Ala Asn Tyr
1446	Response Exceeds Line Limitations	45 50
1447	Response Exceeds Line Limitations	Tyr Gln Cys Tyr Phe Ser Lys Lys Thr Asn
1448	Response Exceeds Line Limitations	55 60
1449	Response Exceeds Line Limitations	Asp Ile Asn Ser His Gln Thr Asp Lys Arg

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION **US/08/882,431B**DATE: 01/11/2000
TIME: 01:18:04**INPUT SET: S34420.raw**

Line	Error	Original Text
1450	Response Exceeds Line Limitations	65 70
1451	Response Exceeds Line Limitations	Lys Thr Cys Met Tyr Gly Gly Val Thr Glu
1452	Response Exceeds Line Limitations	75 80
1453	Response Exceeds Line Limitations	His Asn Gly Asn Gln Leu Asp Lys Tyr
1454	Response Exceeds Line Limitations	85
1468	Response Exceeds Line Limitations	Asn Tyr Asp Lys Val Lys Thr Glu Leu Leu
1469	Response Exceeds Line Limitations	25 30
1470	Response Exceeds Line Limitations	Asn Glu Gly Leu Ala Lys Lys Tyr Lys Asp
1471	Response Exceeds Line Limitations	35 40
1472	Response Exceeds Line Limitations	Glu Val Val Asp Val Tyr Gly Ser Asn Tyr
1473	Response Exceeds Line Limitations	45 50
1474	Response Exceeds Line Limitations	Tyr Val Asn Cys Tyr Phe Ser Ser Lys Asp
1475	Response Exceeds Line Limitations	55 60
1476	Response Exceeds Line Limitations	Asn Val Gly Lys Val Thr Gly Gly Lys Thr
1477	Response Exceeds Line Limitations	65 70
1478	Response Exceeds Line Limitations	Cys Met Tyr Gly Gly Ile Thr Lys His Glu
1479	Response Exceeds Line Limitations	75 80
1480	Response Exceeds Line Limitations	Gly Asn His Phe Asp Asn Gly Asn Leu
1481	Response Exceeds Line Limitations	85
1494	Response Exceeds Line Limitations	Asn Tyr Asp Lys Val Lys Thr Glu Leu Leu
1495	Response Exceeds Line Limitations	25 30
1496	Response Exceeds Line Limitations	Asn Glu Asp Leu Ala Lys Lys Tyr Lys Asp
1497	Response Exceeds Line Limitations	35 40
1498	Response Exceeds Line Limitations	Glu Val Val Asp Val Tyr Gly Ser Asn Tyr
1499	Response Exceeds Line Limitations	45 50
1500	Response Exceeds Line Limitations	Tyr Val Asn Cys Tyr Phe Ser Ser Lys Asp
1501	Response Exceeds Line Limitations	55 60
1502	Response Exceeds Line Limitations	Asn Val Gly Lys Val Thr Gly Gly Lys Thr
1503	Response Exceeds Line Limitations	65 70
1504	Response Exceeds Line Limitations	Cys Met Tyr Gly Gly Ile Thr Lys His Glu
1505	Response Exceeds Line Limitations	75 80
1506	Response Exceeds Line Limitations	Gly Asn His Phe Asp Asn Gly Asn Leu
1507	Response Exceeds Line Limitations	85
1520	Response Exceeds Line Limitations	Asn Tyr Asp Lys Val Lys Thr Glu Leu Leu
1521	Response Exceeds Line Limitations	25 30
1522	Response Exceeds Line Limitations	Asn Glu Asp Leu Ala Lys Lys Tyr Lys Asp
1523	Response Exceeds Line Limitations	35 40
1524	Response Exceeds Line Limitations	Glu Val Val Asp Val Tyr Gly Ser Asn Tyr
1525	Response Exceeds Line Limitations	45 50
1526	Response Exceeds Line Limitations	Tyr Val Asn Cys Tyr Phe Ser Ser Lys Asp
1527	Response Exceeds Line Limitations	55 60
1528	Response Exceeds Line Limitations	Asn Val Gly Lys Val Thr Gly Gly Lys Thr
1529	Response Exceeds Line Limitations	65 70
1530	Response Exceeds Line Limitations	Cys Met Tyr Gly Gly Ile Thr Lys His Glu
1531	Response Exceeds Line Limitations	75 80
1532	Response Exceeds Line Limitations	Gly Asn His Phe Asp Asn Gly Asn Leu
1533	Response Exceeds Line Limitations	85
1546	Response Exceeds Line Limitations	Lys Leu Lys Thr Glu Leu Lys Asn Gln Glu

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/882,431BDATE: 01/11/2000
TIME: 01:18:05**INPUT SET: S34420.raw**

Line	Error	Original Text
1547	Response Exceeds Line Limitations	25 30
1548	Response Exceeds Line Limitations	Met Ala Thr Leu Phe Lys Asp Lys Asn Val
1549	Response Exceeds Line Limitations	35 40
1550	Response Exceeds Line Limitations	Asp Ile Tyr Gly Val Glu Tyr Tyr His Leu
1551	Response Exceeds Line Limitations	45 50
1552	Response Exceeds Line Limitations	Cys Tyr Leu Cys Glu Asn Ala Glu Arg Ser
1553	Response Exceeds Line Limitations	55 60
1554	Response Exceeds Line Limitations	Ala Cys Ile Tyr Gly Gly Val Thr Asn His
1555	Response Exceeds Line Limitations	65 70
1556	Response Exceeds Line Limitations	Glu Gly Asn His Leu Glu Ile Pro Lys
1557	Response Exceeds Line Limitations	75
1570	Response Exceeds Line Limitations	Ile Ile Phe Pro Ser Pro Tyr Tyr Ser Pro
1571	Response Exceeds Line Limitations	25 30
1572	Response Exceeds Line Limitations	Ala Phe Thr Lys Gly Glu Lys Val Asp Leu
1573	Response Exceeds Line Limitations	35 40
1574	Response Exceeds Line Limitations	Asn Thr Lys Arg Thr Lys Ser Gln His
1575	Response Exceeds Line Limitations	45 50
1576	Response Exceeds Line Limitations	Thr Ser Glu Gly Thr Tyr Ile His Phe Gln
1577	Response Exceeds Line Limitations	55 60
1578	Response Exceeds Line Limitations	Ile Ser Gly Val Thr Asn Thr Glu Lys Leu
1579	Response Exceeds Line Limitations	65 70
1580	Response Exceeds Line Limitations	Pro Thr Pro